ABSTRACT

The present invention provides silver oxide particles having an average diameter of less than or equal to 100 nm that are stable and can be transported in dry powder form. The surface of the silver oxide particles is coated with an extremely thin layer of a surfactant such as fatty acid. Nanosized silver oxide particles according to the invention are preferably formed via the addition of a strong base to a mixture including an aqueous silver salt solution and a surfactant dissolved in an organic solvent that is at least partially water miscible. The strong base causes silver oxide to precipitate from the mixture as nanosized particles, which are immediately encapsulated by the surfactant and thus protected from further crystal growth and Ostwald ripening. The nanosized surfactant coated particles of silver oxide can be washed and dried and then transported in dry form.